LHSCC PDI file creation

This guidance document is intended to assist Club members in the creation of PDI (Projected Digital Image) files that meet the criteria for the Club's internal competitions.

The screenshots included are taken from versions of several image editing programs, with the key aspects of each highlighted in red / blue.

1. PDI image file requirements

For LHSCC competitions, digital image files need to be submitted in the following format:
    Mode – RGB, 8 bits only
    Colour space – sRGB
    File Format – Jpeg (i.e. the filename extension is .jpg)
    Image Size – A maximum of 1600 pixels wide and 1200 pixels high.

2. Image capture and workflow

It is expected that your photography image capture and processing workflow will fall into one of the following four categories:

a) Your camera only supports **sRGB jpg** image files, and you do not alter these in your post-processing

b) Your camera supports raw & jpg and sRGB & Adobe RGB colour spaces and you have set it to **sRGB jpg** image file output, and you do not alter this in your post-processing.

c) Your camera supports raw & jpg and sRGB & Adobe RGB colour spaces and you have set it to **Adobe RGB jpg** image file output. Your post processing involves editing in the Adobe RGB colour space.

d) Your camera supports raw & jpg and sRGB & Adobe RGB colour spaces and you have set it to **raw** image file output. Your post-processing involves raw conversion and image editing in a non-sRGB colour space.

If your photography workflow falls under category (a) or (b) then the only aspects of PDI file creation to be addressed are image re-sizing and file naming (see Sections 4 and 5 below).

If your photography workflow falls under category (c) then you will also need to consider Colour space management (see Section 3 below) as well as image re-sizing and file naming.

If your photography workflow falls under category (d) then you will need to manage image bit depth in addition to the other aspects (see Sections 2 to 5 below).

2. Mode and Bit depth

Virtually all digital cameras will produce RGB (Red, Green, Blue) image files.
If they are in jpeg format then they will have a bit depth of be 8 bits. This means the value of each RGB channel can be between 0 and 255. This format is also referred to as 24 bit colour (from the fact that 8 bits per channel x 3 channels equals 24).

Raw files processed into other file formats such as 'tif' may be created as 16bit files – in which case they will need to be converted to 8bits.

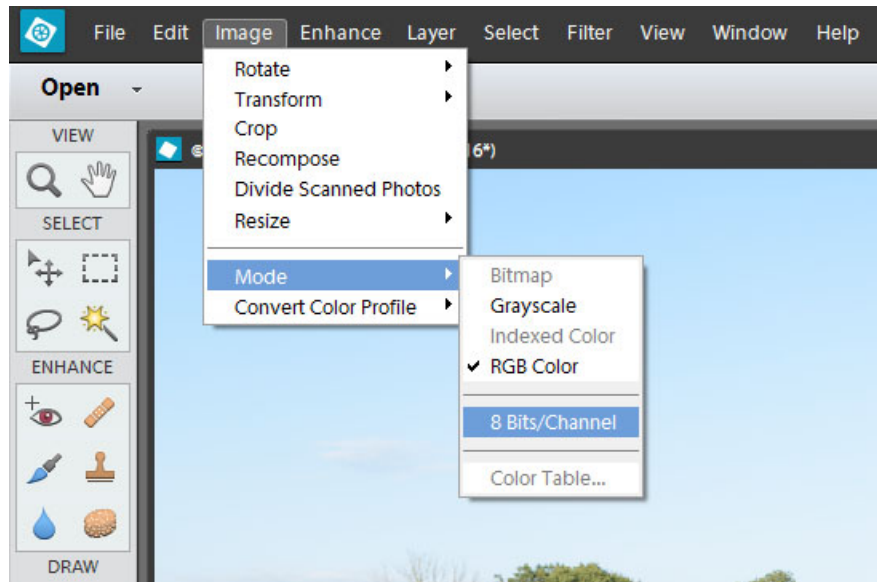**Note that saving a 16bit file to jpg format will automatically convert it to 8bit.**

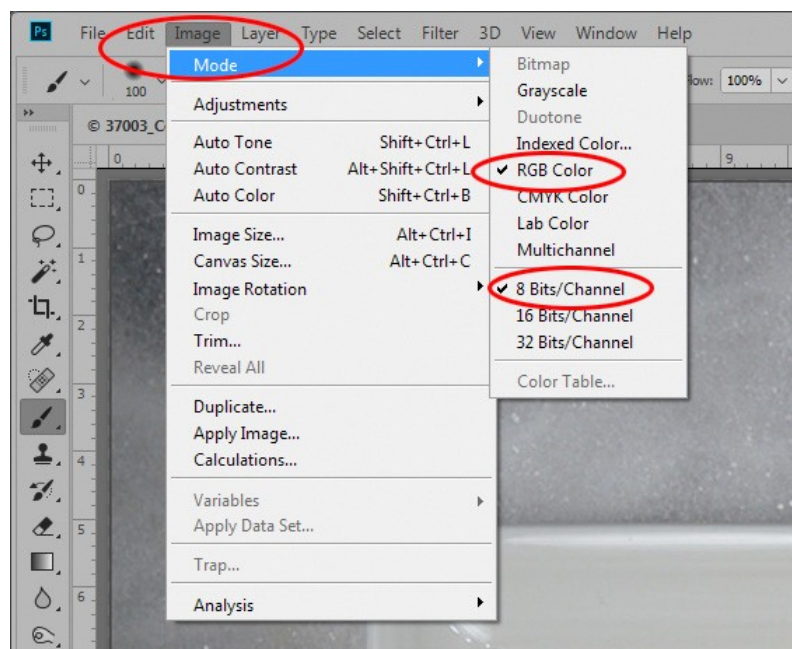Figure 1: Image Mode menu in Photoshop Elements 10

Figure 2: Image Mode menu in Photoshop CC

3. Colour Space management

If you perform image capture or any post-processing in a non-sRGB colour space (e.g. Adobe RGB or ProPhoto RGB) then you will need to convert your image to an sRGB colour profile prior to saving the final PDI file.

Colour space conversion (normally called colour profile conversion) is supported by most of the more comprehensive image editing software packages (e.g. Elements, Lightroom, Photoshop) but some of the inexpensive/free digital image viewing or editing programs do not provide this capability.

See Figures 3 to 5 below for examples of colour profile conversion.
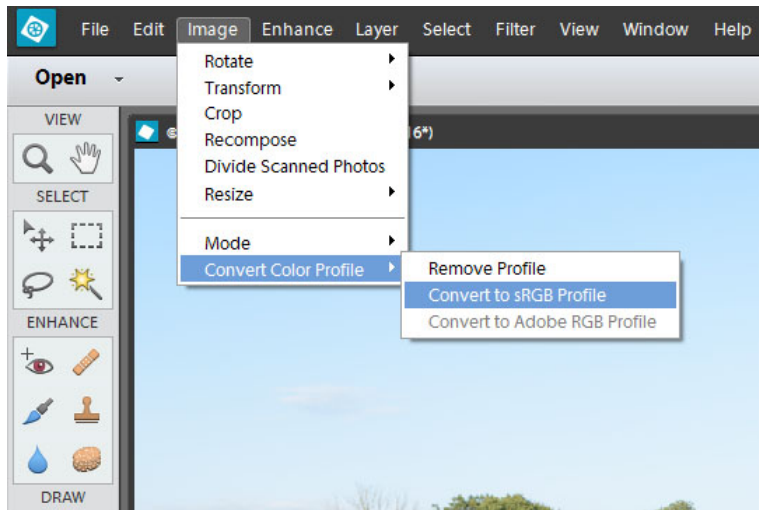
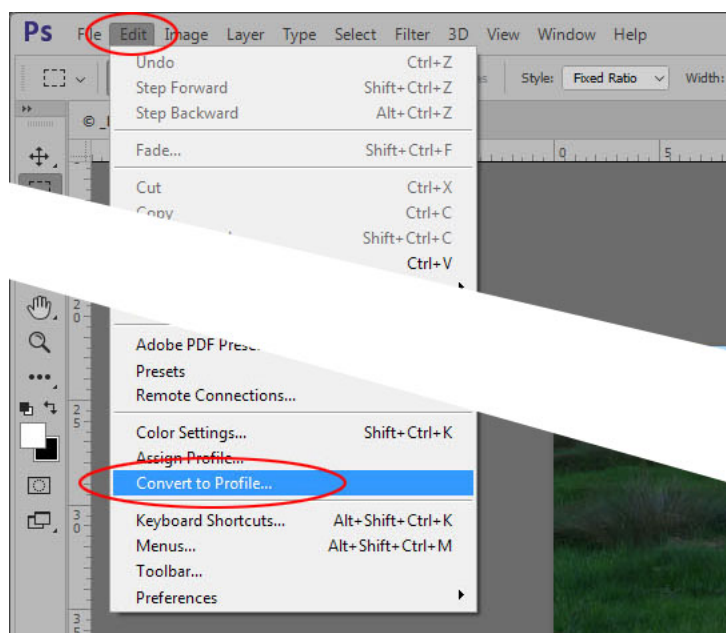Figure 3: Colour Profile conversion in Photoshop Elements 10

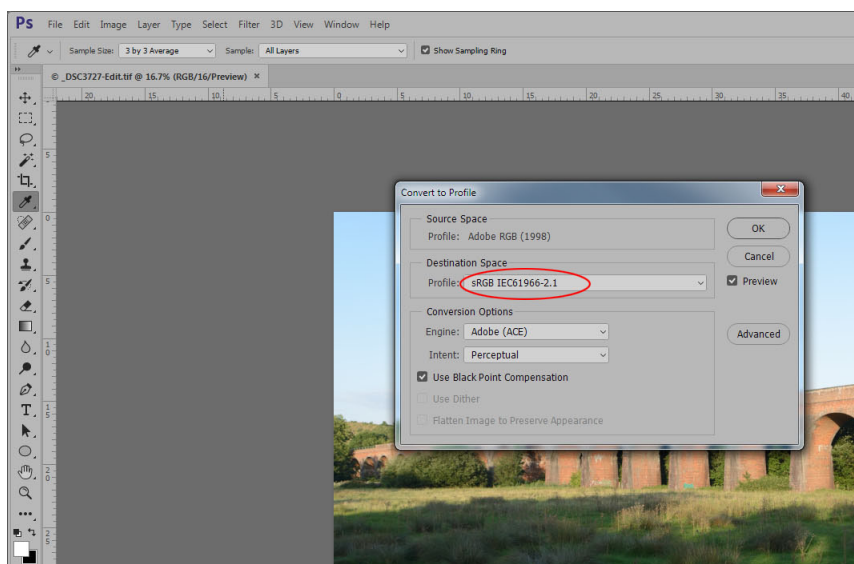Figure 4: Convert to Profile selection on Edit Menu in Photoshop CC

Figure 5: Convert to Profile dialog box in Photoshop CC

4. Image re-sizing

Virtually all digital cameras will produce image files that are significantly larger in size than 1600x1200 pixels and often in a different aspect ratio; for example DSLRS tend to produce images that have an aspect ratio of 3:2 rather than the 4:3 of 1600x1200.

All image editing programs will have the ability to re-size an image, though how they present the means of doing so does vary....

See Figures 6 to 11 below for examples of image sizing menus and dialog boxes.

Note that is important to ensure that the aspect ratio is maintained/locked in the re-sizing process.

When re-sizing images that have been cropped to a more square format remember to check that the height does not exceed 1200 pixels when you set the width to 1600 pixels.
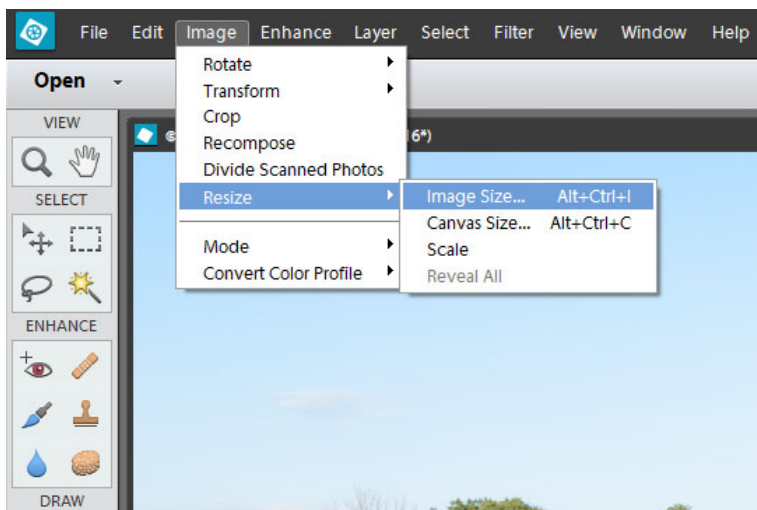

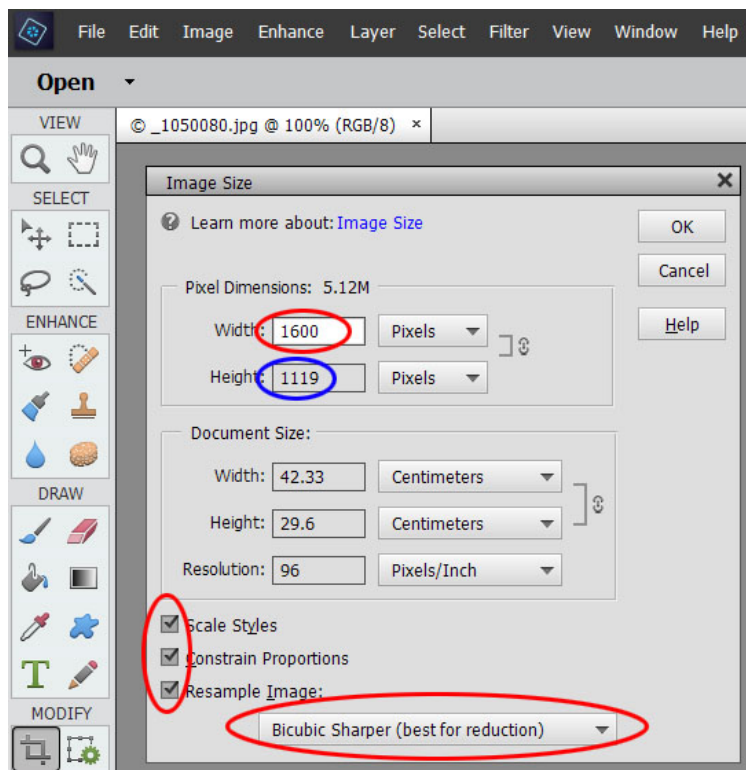Figure 6: Image Size selection from Image Menu in Photoshop Elements 10

Figure 7: Image Size dialog box in Photoshop Elements 14 (landscape format image)
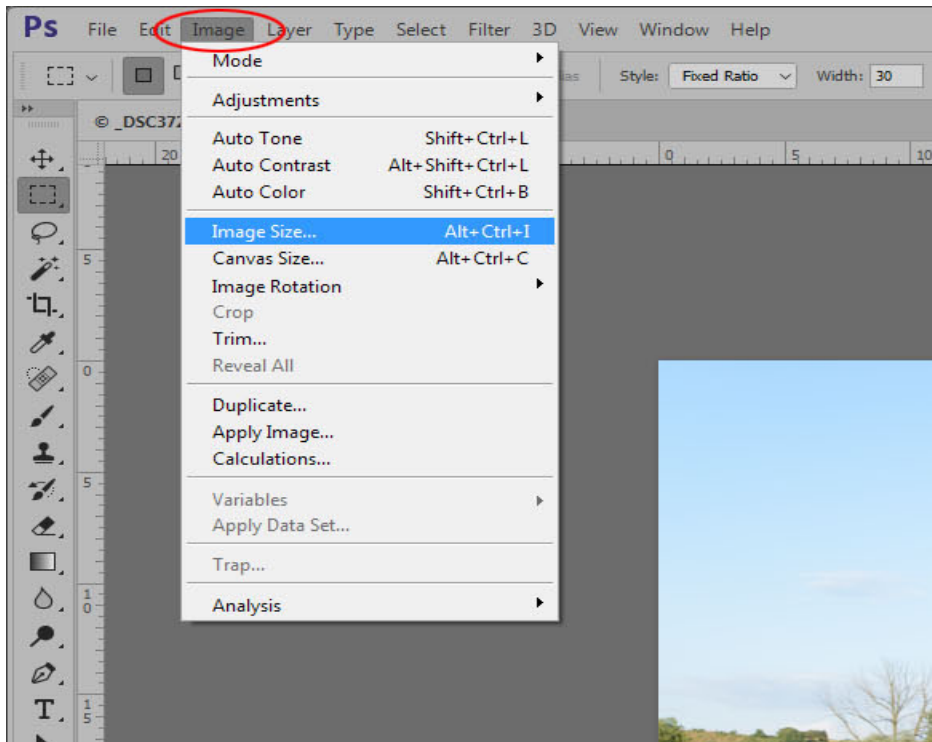
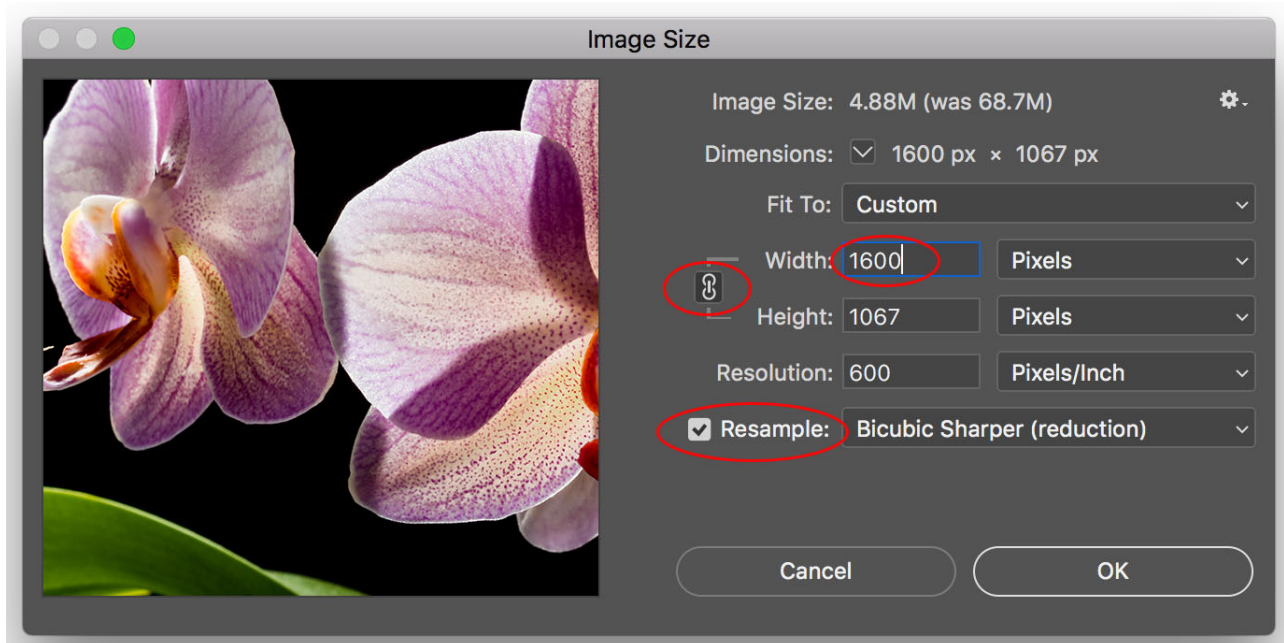Figure 8: Image Size selection from Image Menu in Photoshop CC

Figure 9: Image Size dialog box in Photoshop CC (landscape format image)
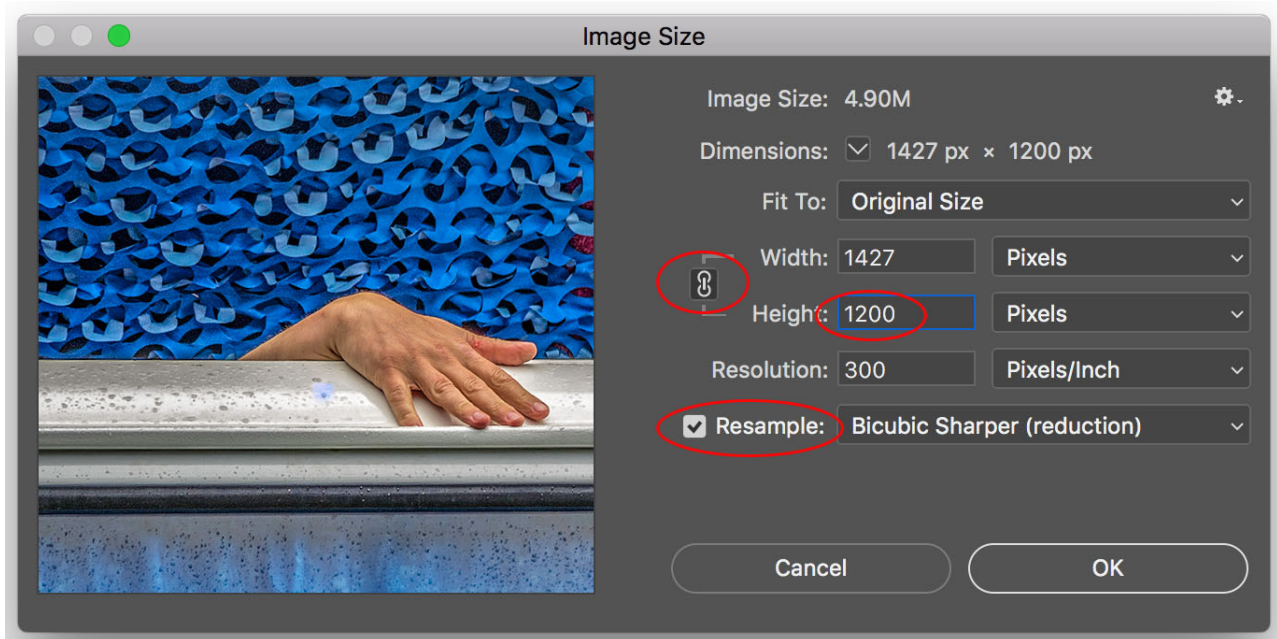
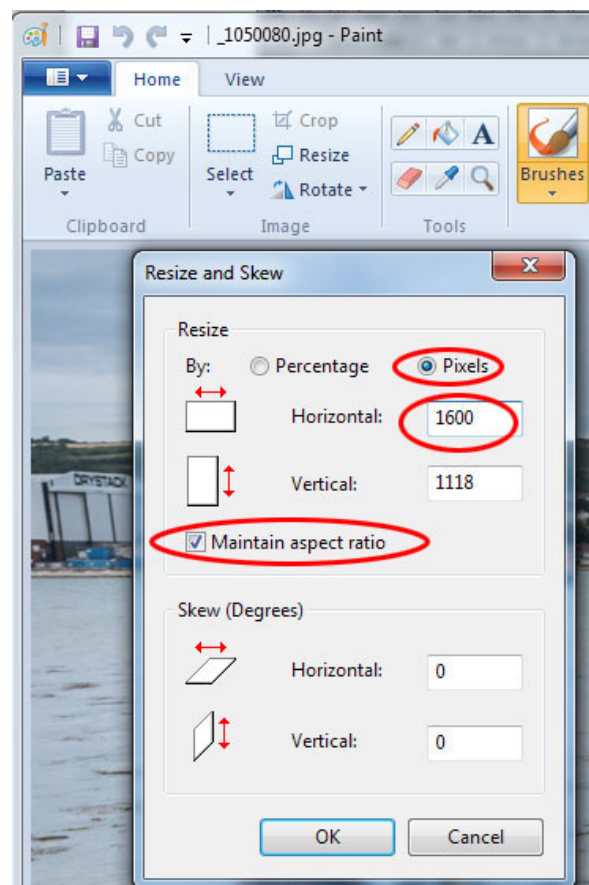Figure 10: Image Size dialog box in Photoshop CC (portrait format image)

Figure 11: Image Resize dialog box in Microsoft Paint (landscape format image)

5. File naming and saving

The PDI filename should comprise:
Your Club membership number followed by number 01 or 02 followed by an 'underscore' and the title of the image, with no special characters such as /, *, ?.

> For example: The filename for the second image, 'A Day at the Races' an entry from LHSCC member 498 would be: 49802_ A Day At The Races.jpg

The filename can either be entered when you save the image file in sRGB jpg format or subsequently (right click on the image filename in Explorer, click 'Rename' and type in the LHSCC competition entry name you have chosen).

See Figures 12 to 14 below for examples of image saving dialog boxes.

If there is a box to embed the sRGB colour profile in the saved image file please ensure that it is ticked!
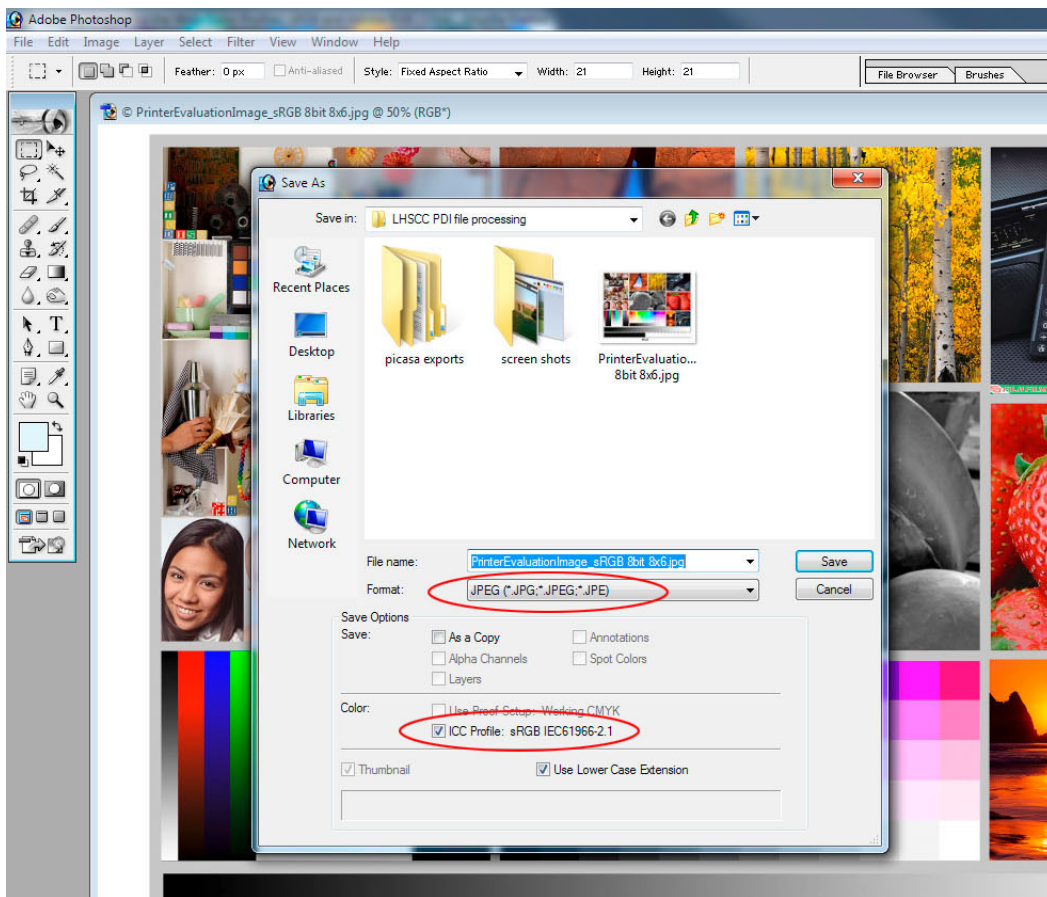

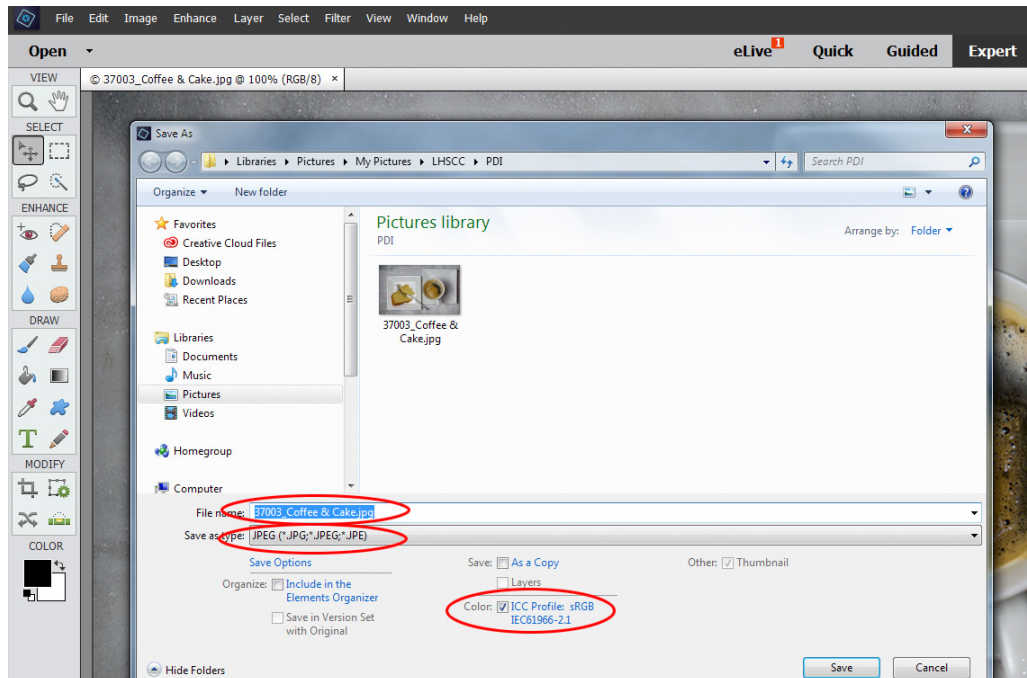Figure 12: File 'Save As' dialog box in Photoshop 7

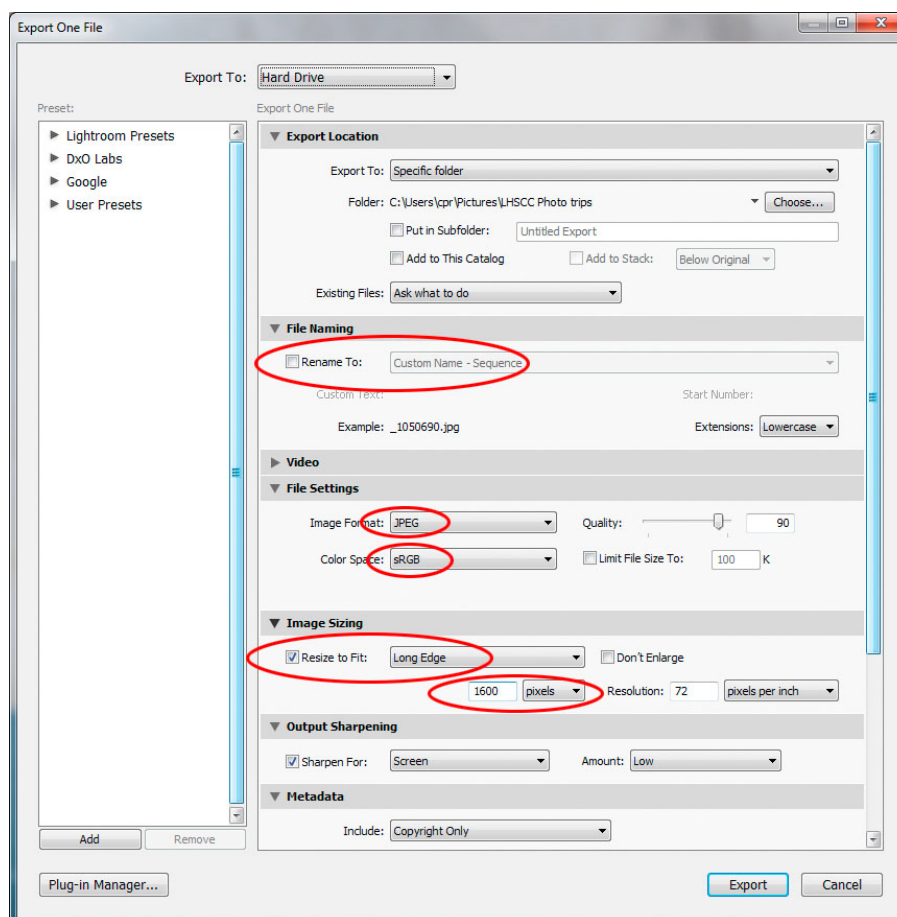Figure 13: File 'Save As' dialog box in Photoshop Elements 14

Figure 14: 'Export' dialog box in Lightroom 6 for a landscape format image

Note that this Lightroom dialog box allows you to set the filename, size, format, and colour space all in one place.

However it does not display the value of the 'short edge' of the re-sized image so this should always be checked after the file has been exported.

6. The Final Check

Use the details tab in the Properties box (right click on the file in Windows Explorer) to check that the final image meets all the LHSCC requirements.

Note that the 'Color representation' will be shown as 'Uncalibrated' if the image is NOT sRGB.
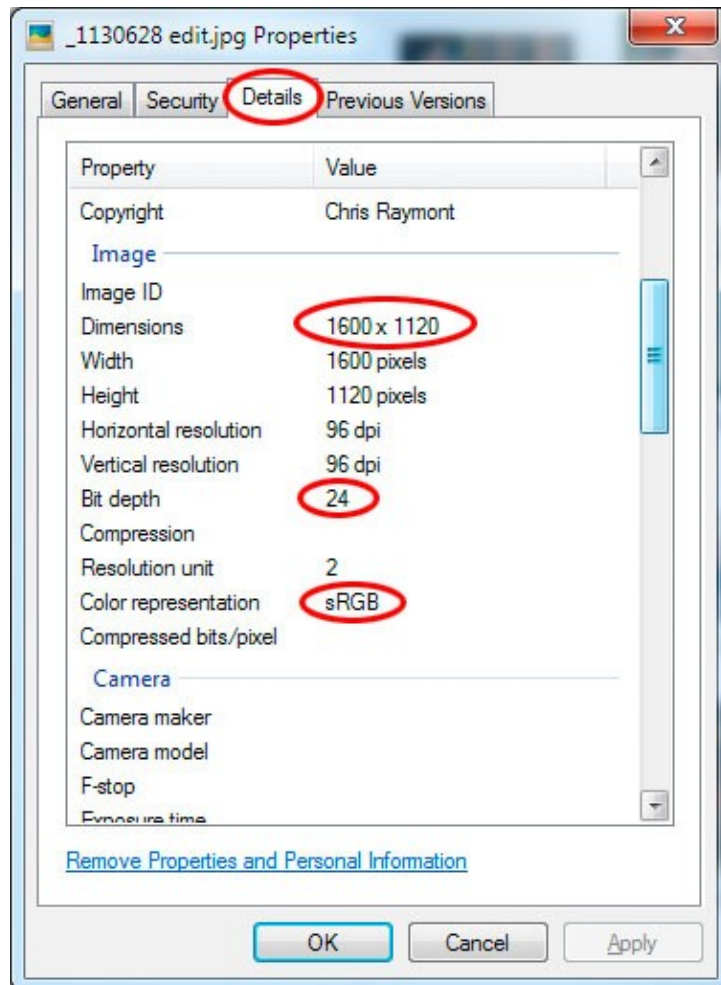

Figure 15: Details tab in Properties (Windows Explorer)

7. PDI copies of Print competition entries

The Club is now requesting that members also submit a pdi version of any Prints they wish to enter into a Club competition.

These print-copy pdi files should have the same format as detailed in Sections 1 to 4 above.

The Print pdi format and file-naming convention is as per Section 5 above, except that the Print pdi filename should be preceded by "p".

> For example: The filename for the pdi copy of Print 'A Day at the Races' by LHSCC member 498 would be: p49802_ A Day At The Races.jpg.